

Historic, Archive Document

Do not assume content reflects current
scientific knowledge, policies, or practices.



WATER SUPPLY OUTLOOK FOR MONTANA

U. S. DEPT. OF AGRICULTURE
NATIONAL AGRICULTURAL LIBRARY

MAY 19 1970

CURRENT SERIAL RECORDS

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

UNITED STATES DEPARTMENT of AGRICULTURE--SOIL CONSERVATION SERVICE,
and
MONTANA AGRICULTURAL EXPERIMENT STATION

Data included in this report were obtained by the agencies named above in cooperation with Federal, State, and private organizations listed on the inside back cover of this report.

AS OF
MAY 1, 1970

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on a measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bazeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Building, Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 340, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES.

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



WATER SUPPLY OUTLOOK FOR MONTANA

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

KENNETH E. GRANT

ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D.C.



Released by

A. B. LINFORD

STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
Bozeman, Montana

In Cooperation with

J. A. ASLESON

DIRECTOR
Montana Agricultural Experiment Station



Report prepared by

P. E. FARNES, Snow Survey Supervisor

SOIL CONSERVATION SERVICE
P.O. Box 98
Bozeman, Montana 59715

TABLE OF CONTENTS

	Page
WATER SUPPLY OUTLOOK	1-2
SUMMARY OF SNOW MEASUREMENTS	3
SOIL MOISTURE	4
RESERVOIR STORAGE	5
PEAK FLOWS	6
STREAMFLOW FORECASTS	7-13
SNOW	14-20
SNOW PILLOW DATA	
Kootenai	
Poorman Creek and Banfield Mountain	21
Hawkins Lake and Garver Creek	22
Columbia	
Black Pine and Hoodoo Basin	23
Twin Lakes, Saddle Mountain and Twelvemile Creek	24
Missouri	
Madison Plateau, Lion Mountain and West Yellowstone	25
Bridger Bowl, Bangtail and Maynard Creek	26
Shower Falls, Carrot Basin and Lick Creek	27
Spur Park and Deadman Creek	28
Rocker Peak and Rocky Boy	29
Mount Lockhart and Waldron	30
Fisher Creek and Northeast Entrance	31
MAP OF SNOW COURSES AND SOIL MOISTURE STATIONS	
COOPERATORS	Inside Back Cover

WATER SUPPLY OUTLOOK FOR MONTANA
May 1, 1970

* Does sprinkler irrigation require less labor, reduce water pollu- *
* tion, improve fish habitat and increase irrigation efficiency? *

* * * * *
* Very little melting with good mountain snowfall *
* during April increased the snow pack to new re- *
* cord amounts in central and southcentral Montana.*
* Other areas with the exception of the Kootenai *
* are above average. The Kootenai drainage snow *
* pack is below average. *
* * * * *

COLUMBIA RIVER DRAINAGE

Snow - Most snow courses had water content increases during April.

All areas increased percentagewise. Many low elevation courses still have considerable snow, indicating little melting during April. The Kootenai River drainage still remains below average while other drainages are 15 to 30 percent above average.

Streamflow - April streamflow was well below average. May through September forecasts are for below average flow on the Kootenai, 15 to 20 percent above average on Clark Fork headwaters, and near average on the remainder of streams. The heavy low elevation snow in the upper Clark Fork and Bitterroot could result in high flows if temperatures are above average and rainfall continuous, or a combination of both. Late season irrigation supplies are expected to be average or above on all drainages.

MISSOURI RIVER DRAINAGE

Snow - Mountain snowfall was heavy and snowmelt almost nil during April.

Snow courses in central and southcentral Montana have the largest water content ever measured, included are courses at all elevations. Other drainages have above average snow pack for this date with the exception of the St. Mary in Glacier Park where near average conditions prevail.

Streamflow - Runoff during April was below average. The May through September flows are forecast near average on northern drainages, above average in the Jefferson and Madison, and near or above maximum of record on most streams in the lower Gallatin, Smith, Judith, Musselshell and Belt Creek drainages. Excessive low elevation snow, wet soils beneath the snow pack and lateness of the season provide a potential for large flows during periods of above average temperatures, rainfall or a combination of both. Late season irrigation supplies are expected to be very good over the southern areas and near average in the north.

YELLOWSTONE RIVER DRAINAGE

Snow - Little snowmelt and heavy April snowfall in the mountains increased the mountain snow pack. Some snow courses in the Crazy, Big Horn and Bear-tooth mountains have the largest snow water content ever measured. Low elevation snow is well above average in all areas. Soils are generally wet.

Streamflow - Runoff during April was below average. May through September streamflow is forecast well above average on the Yellowstone River and tributaries. The Big Horn River in Wyoming is about average. High flows should be expected on Yellowstone River tributaries during periods of very warm weather and/or rainfall. Streamflow will be adequate later than usual. Late season irrigation supplies will be above average.

SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF:	
		Last Year	Average

COLUMBIA RIVER DRAINAGE

Kootenai	16	118	93
Flathead	26	151	118
Upper Clark Fork	19	161	133
Lower Clark Fork	15	138	119
Bitterroot	9	140	115

MISSOURI RIVER DRAINAGE

Jefferson	23	136	133
Madison	11	160	168
Gallatin	13	195	162
Missouri Main Stem	10	221	147
Judith-Musselshell	8	302	158
Marias-Teton-Sun	8	197	126
St. Mary	6	142	102
Milk (Headwaters)	3	198	118

YELLOWSTONE RIVER DRAINAGE

Yellowstone	18	207	150
Little Big Horn	7	231	152

SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average +

COLUMBIA RIVER BASIN

Kootenai

Baree Trail	3800	48	7.5	4/30	6.8	6.3	6.6
Murphy Lake R. S.	3000	48	22.6	4/30	21.6	23.1	22.0
Raven R. S.	3050	48	23.0			20.6	21.7

Flathead

Desert Mountain	5600	54	8.4	5/05	9.0	9.7	8.6
Marias Pass	5250	54	6.5	4/29	4.8	5.9	6.0

Clark Fork

Black Pine	7100	48	10.0	4/30	7.4	9.0	7.4
Seeley Lake R. S.	4030	48	11.9	5/05	12.3	11.6	11.8
Skalkaho Summit	7260	48	10.8	5/01	9.5	10.3	9.9

Bitterroot

Gibbons Pass	7100	48	7.1	4/30	3.8	6.2	6.2
Lolo Pass	5250	48	10.6	5/01	5.0	9.1	7.6

MISSOURI RIVER BASIN

Beaverhead

Lakeview	6700	48	15.3	5/01	6.2	17.3	14.5
----------	------	----	------	------	-----	------	------

Madison

West Yellowstone	6700	48	6.5	4/28	1.8	4.1	-
------------------	------	----	-----	------	-----	-----	---

Gallatin

Bridger Bowl	7250	48	17.0	4/30	16.6	16.7	16.2
College Site	4856	54	14.5	5/01	16.6	15.2	12.9
Lick Creek	6860	48	18.8	5/03	17.4	17.2	18.3
Twenty-One Mile	7150	48	10.0	4/28	2.2	8.4	4.4

Missouri Main Stem

Kings Hill	7420	48	11.8	4/29	6.4	9.0	7.5
Stemple Pass	6350	48	5.9	4/30	3.8	5.4	5.2

Milk

Beaver Creek	3950	48	20.9			-	-
Rocky Boy	4700	36	10.1			-	-

Yellowstone

Battle Ridge	6020	48	17.6	4/30	13.5	14.4	15.2
Northeast Entrance	7350	48	9.4			10.4	7.5

RESERVOIR STORAGE (Thousand Acre Feet) END OF MONTH

Basin or Stream	RESERVOIR	Usable Capacity	Usable Storage		
			This Year	Last Year	Average
COLUMBIA RIVER BASIN					
Flathead	Hungry Horse	3,428.0	1,752.0	2,044.0	1,974.0
	Flathead Lake	1,791.0	752.8	1,266.0	933.7
	Camas (4)	45.2	23.0	28.9	35.1
	Mission Valley (8)	100.3	29.8	77.7	42.0
Clark Fork	Georgetown Lake	31.0	24.2	25.5	21.7
	Nevada Creek	12.6	9.2	12.6	8.6
	Noxon Rapids	334.6	58.9	150.8	144.9
Bitterroot	Como	34.9	11.7	24.5	17.3
	Painted Rocks	31.7	19.3	32.1	27.3
MISSOURI RIVER BASIN					
Beaverhead	Clark Canyon	328.9	149.0	159.1	139.1
	Lima	84.0	53.3	67.2	42.7
Ruby	Ruby	38.8		37.9	35.1
Madison	Hebgen Lake	377.5	266.3	294.3	195.9
	Ennis Lake	41.0	34.9	39.9	35.3
Gallatin	Middle Creek	8.0	4.4	5.2	4.6
Missouri	Canyon Ferry	2,043.0	1,401.0	1,603.0	1,572.0
	Hauser & Helena	61.9	61.3	71.5	57.0
	Lake Helena	10.4	10.2	10.2	8.8
	Holter Lake	81.9	81.1	76.3	63.6
	Smith River	10.7	7.4	11.4	8.7
	Durand	7.0	5.8	7.0	5.8
	Martinsdale	23.1	7.6	13.8	10.1
	Deadman's Basin	72.2	37.0	56.5	51.9
	Fort Peck	19,410.0	16,300.0	16,950.0	11,190.0
	Sun	Gibson	105.0	14.1	51.2
Willow Creek		32.3	25.5	25.0	24.3
Pishkun		32.0	21.8	30.6	21.3
Marias	Lower Two Medicine	16.6		13.7	1.9
	Four Horns	19.2		12.4	12.5
	Swift	30.0	8.8	22.7	24.2
	Lake Frances	112.0	95.2	96.5	86.8
Milk	Tiber	1,347.0	530.9	545.9	654.6
	Fresno	127.2	99.6	131.3	107.3
	Nelson	66.8	52.6	51.0	45.6
	Lake Sherburne	66.1	5.1	39.5	19.4
Yellowstone	Mystic Lake	20.8	2.6	4.0	3.3
	Tongue River	68.0		52.6	27.4
	Cooney	27.5	17.3	22.8	15.9
Big Horn	Yellowtail	1,356.0	850.7	779.3	732.4

PEAK FLOWS (MAXIMUM MEAN DAILY) (Av. flow for 24 hrs. on day of greatest flow)

FORECAST POINT	PEAK FLOW (SECOND FEET)	
	Forecast Range	Average

COLUMBIA RIVER DRAINAGE

Blackfoot River near Bonner	10,000-12,000	10,388
Clark Fork River at Missoula	18,000-20,000	17,024
Bitterroot River near Darby	6,000- 8,000	6,560
Clark Fork River below Missoula	32,000-38,000	30,220
Clark Fork River at St. Regis	40,000-50,000	40,133
N. Fk. Flathead near Columbia Falls	19,000-21,000	24,540
M. Fk. Flathead at West Glacier	20,000-24,000	26,226

MISSOURI RIVER DRAINAGE

Big Hole River near Melrose	8,000- 9,000	7,632
Jefferson River near Sappington	10,000-13,000	9,129
Madison River near West Yellowstone	1,300- 1,600	1,335
Gallatin River near Logan	7,000- 9,000	4,712
Missouri River at Toston	22,000-26,000	16,418
Smith River near Eden	3,500- 5,000	2,466
Belt Creek near Monarch	2,300- 3,200	2,114
Marias River near Shelby	6,200- 7,600	13,801
Judith River near Utica	1,000- 1,200	502
S. Fk. Musselshell at Martinsdale	1,300- 1,500	728

YELLOWSTONE RIVER DRAINAGE

Yellowstone River at Livingston	24,000-26,000	19,153
Boulder River near Big Timber	5,500- 6,500	5,032
Stillwater River near Absaroka	7,000- 9,000	6,562
Clarks Fork River at Chance	8,000- 9,500	7,313
Rock Creek near Red Lodge	1,300- 1,500	1,122
Yellowstone River at Billings	50,000-60,000	41,126

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average

COLUMBIA RIVER BASIN

FISHER RIVER					
Libby (near)	188	88	May-Sept	199	214
	175	88	May-July	184	199
KOOTENAI RIVER					
Libby (at)	5500	74	May-Sept	8087	7444
	4750	74	May-July	7166	6375
YAAK RIVER					
Troy (near)	420	92	May-Sept	506	458
	397	92	May-July	480	434
KOOTENAI RIVER					
Leonia (at)	6200	74	May-Sept	9169	8397
	5420	74	May-July	8123	7271
	4200	74	May-June	6374	5662
RACETRACK CREEK					
Anaconda (near)	36.3	111	May-Sept		32.5
	29.0	111	May-July		26.0
FLINT CREEK					
Boulder Creek (below)(3)	71.7	115	May-Sept	65.9	62.4
	55.0	115	May-July	49.7	47.9
MIDDLE FORK ROCK CREEK					
Philipsburg (near)	81.5	117	May-Sept		69.7
	73.0	117	May-July		62.4
NEVADA CREEK					
Finn (near)	20.1	118	May-Sept		17.0
	18.5	118	May-July		15.6
BLACKFOOT RIVER					
Bonner (near)	970	108	May-Sept	847	896
	870	108	May-July	750	801
	732	108	May-June	586	676
CLARK FORK RIVER					
Milltown (above)(4)	795	122	May-Sept	702	651
	680	122	May-July	598	555
	560	122	May-June	424	458
CLARK FORK RIVER					
Missoula (above)	1765	114	May-Sept	1549	1547
	1550	114	May-July	1348	1356
	1292	114	May-June	1010	1134

(3) Sum Flint Creek at Maxville and Boulder Creek at Maxville.

(4) Difference in observed flow Clark Fork above Missoula and Blackfoot near Bonner.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average
WEST FORK BITTERROOT RIVER					
Conner (near)(5)	161	106	May-Sept	143	152
	148	106	May-July	133	140
EAST FORK BITTERROOT RIVER					
Conner (near)	163	104	May-Sept	146	157
	146	104	May-July	133	141
BITTERROOT RIVER					
Darby (near)	506	101	May-Sept	462	503
	465	101	May-July	431	462
	402	101	May-June	382	399
SKALKAHO CREEK					
Hamilton (near)	52.0	98	May-Sept	53.4	52.9
	45.0	98	May-July	46.9	46.0
BURNT FORK CREEK					
Stevensville (near)(10)	37.2	115	May-Sept	38.4	32.2
	32.0	115	May-July	33.6	27.7
BITTERROOT RIVER					
Missoula (at)(6)	1300	99	May-Sept	1206	1319
	1200	99	May-July	1136	1212
	1020	99	May-June	993	1028
CLARK FORK RIVER					
Missoula (below)	3065	107	May-Sept	2755	2866
	2750	107	May-July	2484	2569
	2312	107	May-June	2003	2162
ST. REGIS RIVER					
St. Regis (near)	250	97	May-Sept		258
	235	97	May-July		242
CLARK FORK RIVER					
St. Regis (at)	4000	104	May-Sept	3681	3855
	3580	104	May-July	3326	3449
	3000	104	May-June	2718	2908
NORTH FORK FLATHEAD RIVER					
Columbia Falls (near)	1700	92	May-Sept	1639	1857
	1540	92	May-July	1495	1680
	1280	92	May-June	1252	1396
MIDDLE FORK FLATHEAD RIVER					
West Glacier (near)	1750	99	May-Sept	1345	1764
	1610	99	May-July	1242	1624
	1340	99	May-June	1018	1355
SOUTH FORK FLATHEAD RIVER					
Columbia Falls (near)(7)	2360	112	May-Sept	1693	2109
	2220	112	May-July	1579	1986
	1920	112	May-June	1344	1718

(5) Adjusted for storage in Painted Rocks Reservoir.

(6) Difference in observed flow Clark Fork above and below Missoula.

(7) Adjusted for storage in Hungry Horse Reservoir.

(10) Adjusted for diversion into Sunset Highline Canal.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average
FLATHEAD RIVER					
Columbia Falls (at)(7)	5940	101	May-Sept	4103	5867
	5500	101	May- July	3040	5403
	4600	101	May- June	2459	4556
SWAN RIVER					
Big Fork (near)	650	108	May- Sept	509	597
	560	108	May- July	442	516
	440	108	May- June	341	405
FLATHEAD RIVER					
Polson (near)(8)	6840	99	May-Sept	4567	6930
	6300	99	May- July	3367	6384
	5300	99	May- June	2599	5351
CLARK FORK RIVER					
Plains (near)(8)	11240	101	May- Sept	8807	11127
	11050	101	May- July	7144	10093
	8550	101	May- June	5640	8447
THOMPSON RIVER					
Thompson Falls (near)	218	93	May- Sept	228	235
	190	93	May- July	199	205
PROSPECT CREEK					
Thompson Falls (at)	118	100	May- Sept	109	118
	109	100	May- July	101	109
CLARK FORK RIVER					
Whitehorse Rapids (at)(9)	12290	100	May- Sept		12313
	11100	100	May- July		11112
	9250	100	May- June		9278

(7) Adjusted for storage in Hungry Horse Reservoir.

(8) Adjusted for storage in Hungry Horse Reservoir and Flathead Lake.

(9) Adjusted for storage in Hungry Horse, Flathead Lake and Noxon Rapids Reservoirs.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD	
	FORECAST		THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average	PERIOD	Last Year Average

MISSOURI RIVER BASIN

RED ROCK RIVER					
Monida (near)(11)	87.5	151	May-Sept	140	57.9
	80.0	151	May-July	102	53.0
BEAVERHEAD RIVER					
Armstead (near)(11)(12)	116	162	May-Sept	196	71.5
	90.0	162	May-July	125	55.5
RUBY RIVER					
Alder (near)	104	145	May-Sept	96.4	71.6
	86.0	146	May-July	81.1	58.6
BIG HOLE RIVER					
Melrose (near)	705	115	May-Sept	665	611
	650	115	May-July	624	563
BIRCH CREEK					
Glen (near)	14.7	119	May-Sept	17.6	12.4
	12.2	119	May-July	14.9	10.3
BOULDER RIVER					
Boulder (near)	88.2	124	May-Sept	81.9	71.0
	84.0	124	May-July	77.6	67.6
JEFFERSON RIVER					
Sappington (at)(12)	1020	125	May-Sept	1002	817
	910	125	May-July	897	725
WILLOW CREEK					
Harrison (near)	25.6	190	May-Sept	19.6	13.5
	23.5	191	May-July	18.3	12.3
MADISON RIVER					
West Yellowstone (near)	198	108	May-Sept	208	184
	144	108	May-July	149	133
MADISON RIVER					
Grayling (near)(13)	417	111	May-Sept	496	376
	315	111	May-July	384	284
MADISON RIVER					
McAllister (near)(14)	810	126	May-Sept	845	643
	625	126	May-July	664	495
GALLATIN RIVER					
Gateway (near)	618	140	May-Sept	522	440
	515	140	May-July	444	367

(11) Adjusted for storage in Lima Reservoir.

(12) Adjusted for storage in Clark Canyon Reservoir.

(13) Adjusted for storage in Hebgen Lake.

(14) Adjusted for storage in Hebgen and Ennis Lakes.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR			PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average
HYALITE CREEK					
Bozeman (near)(15)	60.0	172	May-Sept	49.1	34.9
	51.6	172	May-July	43.0	30.0
GALLATIN RIVER					
Logan (at)	780	189	May-Sept	578	413
	645	189	May-July	484	341
MISSOURI RIVER					
Toston (at)(16)	2720	150	May-Sept	2371	1810
	2315	150	May-July	1980	1540
SHEEP CREEK					
White Sulphur Springs (near)	28.0	160	May-Sept	13.1	17.5
	24.0	160	May-July	10.7	15.0
SMITH RIVER					
Eden (near)	318	200	May-Sept	143	159
	290	200	May-July	123	145
SUN RIVER					
Gibson Dam (at)(17)	615	107	May-Sept	440	574
	560	107	May-July	398	525
BELT CREEK					
Monarch (near)	200	197	May-Sept		103
	185	197	May-July		93.9
MISSOURI RIVER					
Fort Benton (at)(18)	4250	146	May-Sept		2915
	3550	146	May-July		2428
TWO MEDICINE CREEK					
Browning (near)(19)	242	106	May-Sept		229
	230	106	May-July		218
BADGER CREEK					
Browning (near)	121	99	May-Sept		122
	104	99	May-July		105
CUT BANK CREEK					
Cut Bank (at)	114	109	May-Sept		105
	104	109	May-July		95.5
MARIAS RIVER					
Shelby (near)(20)	550	103	May-Sept	340	532
	525	103	May-July	336	509

(15) Adjusted for storage in Middle Creek Reservoir.

(16) Adjusted for storage in Hebgen and Ennis Lakes and Clark Canyon Reservoir.

(17) Adjusted for storage in Gibson Reservoir and diversions.

(18) Adjusted for storage in Canyon Ferry Reservoir.

(19) Adjusted for storage in Two Medicine Reservoir and diversions into Two Medicine Canal.

(20) Adjusted for storage in Two Medicine, Four Horns, Lake Frances and Swift Reservoirs.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD	
	FORECAST		THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average	PERIOD	Last Year Average
MISSOURI RIVER				
Virgelle (at)(21)	4950	139	May-Sept	3554
	4210	139	May-July	3029
SOUTH FORK JUDITH RIVER				
Utica (near)	26.9	232	May-Sept	11.6
	25.0	232	May-July	10.8
MISSOURI RIVER				
Landusky (near)(21)	5500	141	May-Sept	3941
	4720	141	May-July	3346
NORTH FORK MUSSELSHELL RIVER				
Delpine (near)	10.5	224	May-Sept	4.7
	8.5	224	May-July	3.8
SOUTH FORK MUSSELSHELL RIVER				
Martinsdale (above)	86.5	207	May-Sept	41.8
	82.0	207	May-July	39.6
MISSOURI RIVER				
Fort Peck Dam (below)(22)	5200	140	May-Sept	3713
	4520	140	May-July	3225
MILK RIVER				
Eastern Crossing (at)	210	96	May-Sept	220
MISSOURI RIVER				
Wolf Point (near)(22)	5500	140	May-Sept	3939
	4800	140	May-July	3423
MISSOURI RIVER				
Williston, N.D. (near)(29)	13000	136	May-Sept	9625
	11200	136	May-July	8227

SASKATCHEWAN RIVER BASIN

ST. MARY RIVER				
Babb (near)(30)	450	95	May-Sept	472
	388	95	May-July	407

- (21) Adjusted for storage in Canyon Ferry and Tiber Reservoirs.
 (22) Adjusted for storage in Canyon Ferry, Tiber and Fort Peck Reservoirs.
 (29) Adjusted for storage in Canyon Ferry, Tiber, Fort Peck, Buffalo Bill, Boysen and Yellowtail Reservoirs. Sum, Yellowstone River near Sidney and Missouri River near Culbertson.
 (30) Adjusted for storage in Lake Sherburne.

STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD	
	FORECAST		THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average	PERIOD	Last Year Average

YELLOWSTONE RIVER BASIN

YELLOWSTONE RIVER					
Corwin Springs (at)	2280	126	May-Sept	1950	1804
	1890	126	May-July	1656	1498
YELLOWSTONE RIVER					
Livingston (near)	2770	137	May-Sept		2025
	2290	137	May-July		1672
BOULDER RIVER					
Big Timber (at)	437	130	May-Sept		337
	410	130	May-July		316
STILLWATER RIVER					
Absarokee (near) (25)	710	132	May-Sept		538
	600	132	May-July		455
CLARKS FORK RIVER					
Chance (at)	700	125	May-Sept		561
	640	125	May-July		510
ROCK CREEK					
Red Lodge (near)	131	126	May-Sept	100	104
	101	126	May-July	73.8	79.9
YELLOWSTONE RIVER					
Billings (at)	5100	137	May-Sept	3800	3726
	4440	139	May-July	3303	3182
BIG HORN RIVER					
St. Xavier (near) (26)	1700	106	May-Sept	1423	1599
	1600	106	May-July	1352	1503
LITTLE BIG HORN RIVER					
Lodgegrass (near) (28)	165	149	May-Sept		111
	145	149	May-July		97.4
YELLOWSTONE RIVER					
Miles City (at) (27)	7200	132	May-Sept		7200
	6300	132	May-July		6300
YELLOWSTONE RIVER					
Sidney (near) (27)	7350	132	May-Sept		7350
	6550	132	May-July		6550

(25) Adjusted for storage in Mystic Lake.

(26) Adjusted for storage in Buffalo Bill, Boysen, Bull Lake and Yellowtail Reservoirs.

(27) Adjusted for storage in Buffalo Bill, Boysen and Yellowtail Reservoirs.

(28) Sum, Little Big Horn below Pass Creek and Lodgegrass Creek near Wyola.

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average

COLUMBIA RIVER BASIN

KOOTENAI RIVER

Bald Eagle Peak	5700	4/27	144	60.9	66.6	-
Banfield Mountain	5600	4/30	61	26.7	24.1	-
Banfield Mountain Pillow	5600	4/30	SP	21.7	22.0	-
Baree Creek	5500	5/01	115	49.2	44.2	48.4
Baree Midway	4600	5/01	99	41.1	32.9	-
Baree Trail	3800	5/01	21	8.7	0.0	1.0
Bear Mountain	5400	4/28	144	62.0	69.7	-
Bristow Creek	3900	4/30	20	8.6	0.0	-
Brush Creek	5000	5/04	33	13.2	6.6	10.7
Brush Creek Timber	5000	5/04	28	11.2	4.6	9.4
Cedar Grove	4100	4/27	29	10.4	2.3	-
Davis Creek	5400	4/29	60	25.4	21.9	-
Fernie	3500	4/29	14	4.0	0.0	3.0
Field	4200	4/30	3	0.6	0.0	1.0
Garver Creek	4250	4/29	22	9.4	4.4	-
Garver Creek Pillow	4250	4/29	SP	7.2	5.6	-
Glacier	4100	4/29	61	24.6	25.6	28.3
Graves Creek	4300	5/01	44	19.0	13.9	16.8
Gray Creek	5100	4/29	50	14.8	16.9	21.0
Halverson Creek	4850	4/28	116	48.3	52.7	-
Hawkins Lake	6450	4/29	79	29.1	39.4	-
Hawkins Lake Pillow	6450	4/29	SP	26.8	39.2	-
Keeler Creek	3300	4/28	3	1.4	0.0	-
Kicking Horse	5400	4/30	34	10.2	10.4	14.5
Kimberley	3800	4/29	0	0.0	0.0	8.5
Lost Soul	4800	4/30	35	15.6	5.3	-
Marble Canyon	5000	4/30	28	7.8	8.8	12.8
Morrissey Ridge	6100				26.7	28.8
New Fernie	4100	4/29	33	11.8	-	7.3
Poorman Creek	5100	4/27	84	34.8	35.9	-
Poorman Creek Pillow	5100	4/27	SP	27.7	34.1	-
Red Mountain	6000	4/29	57	19.8	20.3	21.0
Sinclair Pass	4500	4/30	8	3.3	0.0	2.3
Stahl Peak	6050	5/01	93	39.3	45.0	-
Sullivan Mine	5100	4/29	33	10.7	12.6	13.1
Upper Elk River	4400	4/26	5	1.7	0.0	2.2
Weasel Divide	5450	5/01	78	34.0	33.3	36.6

SP - Snow pillow observation - water content only.

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average

FLATHEAD RIVER

Bassoo Peak	5150	4/28	37	13.6	4.9	8.3
Beaver Lake	5900	4/17	87	32.3	18.6	26.6
Big Creek	6750	4/29	133	55.8	47.4	51.7
Camp Misery	6400	4/28	133	54.1	47.6	50.5
Desert Mountain	5600	5/03	33	16.6	9.3	15.1
Fatty Creek	5500	4/29	78	31.4	18.5	23.2
Griffin Creek Divide	5150	4/28	41	14.0	5.0	8.1
Gunsight Lake	6300	4/17	108**	44.4	37.8	44.5
Hell Roaring Divide	5770	4/29	79	31.7	28.1	33.5
Holbrook	4530	5/01	18	5.7	0.0	1.8
Logan Creek	4300	5/04	17	6.6	0.0	3.5
Marias Pass	5250	5/04	62	23.4	11.6	18.7
Mineral Creek	4000	4/28	53	18.5	7.7	15.3
Noisy Creek	3600	4/28	2	0.4	-	-
North Fork Jocko	6330	4/30	130	53.0	39.8	49.1
Spotted Bear Mountain	7000	4/17	44**	17.6	0.0	12.2
Trinkus Lake	6100	4/17	122**	53.4	37.2	47.1
Twin Creeks	3580	4/17	30**	12.4	0.0	1.8
Upper Holland Lake	6200	4/17	89**	33.4	33.2	39.7

CLARK FORK RIVER

Black Pine	7100	4/30	62	18.8	13.0	15.3
Black Pine Pillow	7100	4/30	SP	18.1	13.8	-
Combination	5600	4/30	26	7.5	-	-
Copper Creek	5700	5/01	45	15.7	3.0	11.0
Cotter Mine	6250	5/01	59	22.1	15.2	16.3
Coyote Hill	4200	4/29	26	10.0	0.0	2.9
Fred Burr Pass	8000	5/05	86	31.8	29.4	29.6
Heart Lake Trail	4800	5/01	62	24.3	15.0	17.2
Hoodoo Basin	6000	5/01	138	56.5	51.2	-
Hoodoo Basin Pillow	6000	5/01	SP	56.2	-	-
Hoodoo Creek	5900	5/01	132	53.2	49.2	52.0
Intergaard	6450	5/01	38	10.3	7.4	7.8
Lookout	5250	4/30	111	42.4	37.4	36.7
Lubrecht Forest No. 3	5450	4/28	28	8.4	2.0	3.1
Lubrecht Forest No. 4	4650	4/28	6	1.7	0.0	0.2
Lubrecht Forest No. 6	4040	4/28	2	0.6	0.0	0.0
Red Lion	7100	5/01	78	22.4	16.0	18.0
Skalkaho Summit	7260	5/01	90	31.2	25.0	27.3
Slide Rock Mountain	7100	4/29	66	21.5	14.6	16.5
Southern Cross	6500	5/01	29	8.8	-	-
Storm Lake	7780	4/30	69	20.1	14.4	16.6
Stuart Mill	6500	5/01	26	8.2	-	-
Stuart Mountain	7400	4/29	107	41.5	-	32.6
TV Mountain	6800	4/27	78	24.2	21.3	20.0

SP - Snow pillow observation - water content only.

** - April 15 survey.

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average

BITTERROOT RIVER

Ambrose	6480	4/30	57	16.6	9.4	13.2
Coyote Meadows Trail	7000	5/04	53	21.6	17.4	-
Gibbons Pass	7100	4/29	84	29.0	21.6	23.1
Lolo Pass	5230	4/28	92	34.6	23.7	32.7
Lost Horse	5940	4/28	107	37.6	29.7	34.0
Moose Creek	6200	4/30	64	22.4	10.9	12.3
Nez Perce Camp	5680	4/27	50	16.8	5.2	11.7
Nez Perce Pass	6570	4/27	62	21.8	9.6	13.9
Saddle Mountain	7940	4/29	95	31.4	28.6	28.0
Saddle Mountain Pillow	7940	4/29	SP	33.8	29.4	-
Savage Pass	6600	4/28	84	29.9	24.3	-
Twelvemile Creek	5600	4/29	70	25.2	7.1	-
Twelvemile Creek Pillow	5600	4/29	SP	22.5	18.7	-
Twin Lakes	6510	4/28	133	48.6	38.8	48.0
Twin Lakes Pillow	6400	4/28	SP	48.2	40.9	-

SP - Snow pillow observation - water content only.

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average

MISSOURI RIVER BASIN

BEAVERHEAD RIVER

Bloody Dick	7600	4/30	44	14.2	9.2	11.0
Dad Creek Lake	8400	5/05	67	22.0	16.1	14.2
Elk Horn Springs	7800	4/30	43	11.0	6.8	9.2
Gold Stone	8100	4/29	58	19.7	15.0	16.0
Lakeview Canyon	6930	5/05	37	12.3	20.4	10.7
Lakeview Ridge	7400	5/05	32	10.8	12.5	9.0
Sawtelle Mountain	8715	4/30	113	41.4	44.8	-
White Pine Ridge	8850	5/05	36	11.4	3.1	6.5

RUBY RIVER

Branham Lakes	8850	4/30	119	44.0	33.6	-
Clover Meadow	8600	5/05	75	27.4	18.8	17.6
Divide	7900	5/05	38	13.3	11.8	9.0
Middle Mill Creek	7850	4/30	83	25.8	15.8	-
Notch	8500	5/05	73	25.8	18.4	15.0
Smuggler Mine	6960	4/30	56	15.6	9.9	-

BIG HOLE RIVER

Abundance Lake	8800	5/05	72	27.4	21.0	22.0
Calvert Creek	6450	5/01	38	12.7	-	-
Darkhorse Lake	8600	5/05	81	33.8	27.6	29.2
Foolhen	8280	5/05	58	21.5	19.2	19.1
Jahnke Lake Trail	7200	4/30	39	13.2	-	-
Mudd Lake	7650	5/01	68	24.7	19.5	-
Palisade Creek	8250	5/01	110	38.6	32.7	-
Slag-A-Melt Lake	8750	5/05	87	36.0	27.0	-

JEFFERSON RIVER

Berry Meadow	7300	4/27	40	11.3	6.6	8.0
Copper Mountain	7700	4/30	53	15.5	9.6	-
Nez Perce Creek	6500	4/30	31	9.2	-	-
Picnic Grounds	6500	5/01	25	7.0	-	-
Pipestone Pass	7200	4/28	33	8.8	5.0	5.6
Rocker Peak	8000	4/27	68	21.5	14.6	-
Rocker Peak Pillow	8000	4/27	SP	20.0	17.8	-
Uncle Sam Gulch	6500	4/27	33	9.7	0.0	-

SP - Snow pillow observation - water content only.

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Elevation				Last Year	Average

MADISON RIVER

Big Springs	6500	4/30	62	24.5	14.1	17.0
Call Road	8050	5/05	59	20.1	9.4	11.8
Four Mile	6900	4/29	57	14.2	3.0	6.0
Hebgen Dam	6550	4/29	34	11.8	3.6	5.8
Island Park	6315	4/30	47	18.4	9.4	9.7
Lake Creek	6100	5/04	19	7.3	0.0	2.3
Lion Mountain	8760	4/30	76	25.2	26.1	-
Lion Mountain Pillow	8760				-	-
Lower Twin	7900	4/28	107	31.8	21.4	22.5
Madison Plateau	7750	4/29	67	23.8	27.8	-
Madison Plateau Pillow	7750	4/29	SP	28.6	28.4	-
Meridian Creek	7000	5/04	31	8.8	-	8.0
Norris Basin	7500	No Measurement			0.0	7.6
North Meadow	7500	No Measurement			9.2	7.8
Potomageton Park	7150	4/30	44	15.4	10.5	10.2
Sentinel Creek	8300	4/30	88	30.5	28.7	25.2
Soap Bogus Divide	7600	5/03	62	19.8	17.4	-
Targhee Pass	7000	4/30	56	17.8	18.1	-
Tepee Creek	8000				-	14.3
Valley View	6500	4/30	46	16.7	13.8	13.0
West Yellowstone	6700	4/28	36	12.6	6.2	6.2
West Yellowstone Pillow	6700				6.0	-
Whiskey Creek	6800	4/29	63	22.8	15.3	-

GALLATIN RIVER

Arch Falls	7350	5/02	75	23.3	11.9	14.2
Bear Basin	8150	5/01	99	32.6	19.2	23.2
Bridger Bowl	7250	4/30	126	45.6	25.8	30.1
Bridger Bowl Pillow	7250	4/30	SP	44.7	22.1	29.0
Carrot Basin	9000	5/01	120	48.8	-	-
Carrot Basin Pillow	9000				-	-
Devils Slide	8100	5/02	116	40.5	22.0	25.7
Hood Meadow	6600	5/02	56	19.6	5.4	8.0
Lick Creek	6860	5/02	65	19.7	3.4	9.0
Lick Creek Pillow	6860	5/02	SP	20.7	3.0	8.3
Little Park	7400	5/01	75	24.1	14.2	17.0
Maynard Creek	6210	4/30	89	32.8	12.9	-
Maynard Creek Pillow	6210	4/30	SP	19.0	10.1	-
Shower Falls	8100	5/02	119	44.9	26.8	28.6
Shower Falls Pillow	8100	5/02	SP	40.7	25.5	26.7
Twenty-One Mile	7150	4/28	54	19.0	20.2	16.0

SP - Snow pillow observation - water content only.

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
					Last Year	Average

MISSOURI RIVER (Main Stem)

Boulder Mountain	7950	4/27	75	26.4	17.0	19.8
Chessman Reservoir	6200	4/30	38	8.9	0.6	3.2
Deadman Creek	6450	4/29	64	19.2	0.0	-
Deadman Creek Pillow	6450	4/29	SP	17.2	0.0	-
Elk Peak	8000	4/28	80	26.8	10.8	19.7
Grasshopper	7000	4/28	32	8.9	0.0	6.0
Kings Hill	7500	4/28	79	25.6	10.8	14.7
Stemple Pass	6600	5/01	50	12.0	6.8	10.8
Ten Mile Lower	6600	4/30	49	11.4	2.0	5.3
Ten Mile Middle	6800	5/04	49	15.6	8.0	11.6
Ten Mile Upper	8000	5/04	68	22.0	14.6	16.0

SUN-TETON-MARIAS RIVERS

Badger Pass	6900	4/17	131**	49.0	39.0	42.0
Blue Lake	5900	4/17	79**	29.0	14.4	-
Cabin Creek	5200	4/26	20	6.1	0.0	2.2
Five-Bull	5700	4/17	42**	12.4	0.8	5.3
Freight Creek	6000	4/17	57**	16.8	3.5	16.4
Goat Mountain	7000	No Measurement			7.2	11.8
Mount Lockhart	6400	4/24	75	27.4	15.8	-
Mount Lockhart Pillow	6400	4/24	SP	24.0	16.0	-
Waldron	5600	4/24	40	14.2	0.0	-
Waldron Pillow	5600	4/24	SP	13.8	3.7	-
Wrong Creek	5700	4/29	58	15.0	3.2	13.0
Wrong Ridge	6800	4/30	84	25.5	12.9	22.5

JUDITH RIVER

Avalanche	7100	5/03	122	44.0E	15.4	-
Crystal Lake	6100	5/03	87	30.2	3.0	14.0
Rock Creek	5600	5/03	72	22.2	1.0	-
Spur Park	8000	4/29	97	35.0	16.6	24.0
Spur Park Pillow	8000	4/29	SP	33.3	17.9	-

MUSSELSHELL RIVER

Daisy Peak	7600	4/29	71	19.8	2.0	-
Eagle Creek	7000	4/27	64	21.6	-	-
Forest Lake	6400	4/27	57	18.8	0.0	-
Haymaker	8050	5/01	84	24.4	-	-
Johnson Park	6450	4/29	42	10.8	0.0	-

SP - Snow pillow observation - water content only.

E - Estimated data.

** - April 15 survey.

SNOW

DRAINAGE BASIN and/or SNOW COURSE		THIS YEAR			PAST RECORD	
		Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Elevation				Last Year	Average

MILK RIVER

Bear Paw Ski Area	5200				-	-
Rocky Boy	4700				-	-
Rocky Boy Pillow	4700				-	-

ST. MARY RIVER

Hudson Bay Divide	5800	5/04	65	23.6	13.8	21.5
Iceberg Lake No. 3	5600	5/06	77	35.4	22.8	32.9
Josephine Lower No. 9	4900	5/05	53	20.6	13.8	20.1
Mount Allen No. 7	5700	5/05	111	50.1	38.0	50.3
Piegian Pass No. 6	5500	5/05	95	44.1	31.8	43.6
Ptarmigan No. 8	5800	5/06	90	40.2	30.0	41.8

UPPER YELLOWSTONE RIVER

Bald Ridge	7500	4/30	72	21.9	3.7	12.5
Camp Senia	7890	4/28	63	15.2	6.2	8.2
Canyon	7750	5/02	58	19.4	14.3	15.3
Cooke Station	8150	4/30	77	27.7	18.8	-
East Entrance	7000	5/01	38	12.0	0.0	-
Fisher Creek	9100	4/30	124	46.7	40.0	-
Fisher Creek Pillow	9100	4/30	SP	43.9	35.4	-
Grizzly Peak	8400	5/05	108	31.0	11.7	22.0
Independence	8000	5/04	59	22.9	14.8	17.9
Lake Camp	7850	4/30	42	10.8	8.7	7.8
Lodgepole	8200	5/01	53	14.8	8.2	10.6
Lupine Creek	7300	5/01	42	13.9	0.0	8.0
Mill Creek	7500	4/29	71	22.4	-	-
Monument Peak	9000	5/04	78	32.6	27.2	27.4
Northeast Entrance	7400	5/02	42	15.2	4.6	7.1
Northeast Entrance Pillow	7350				4.3	-
Porcupine R. S.	6500	4/30	50	13.6	0.5	7.7
Sacajawea	6550	4/30	76	26.9	6.3	12.1
South Fork Shields	8100	5/04	97	37.5	20.2	27.2
Sylvan Pass	7100	5/01	56	19.5	0.0	10.9
Timberline Creek	8850	4/28	73	23.4E	14.3	18.2
White Mill	8700	4/30	94	35.6	27.4	-

SP - Snow pillow observation - water content only.

E - Estimated data.

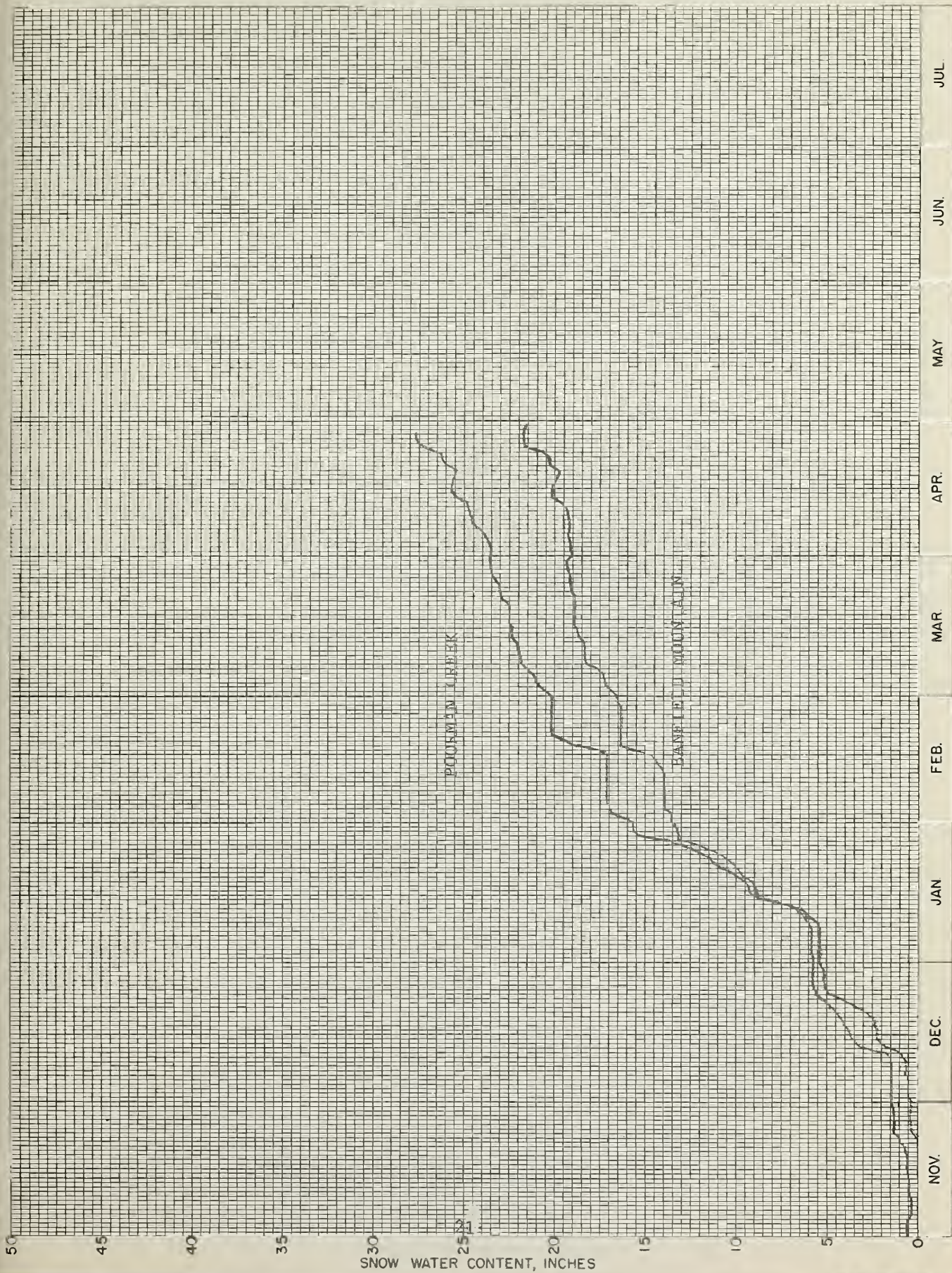
SNOW PILLOW DATA
WATER YEAR 1970

No. _____

Elev. _____

Drainage: _____

KOOTENAI



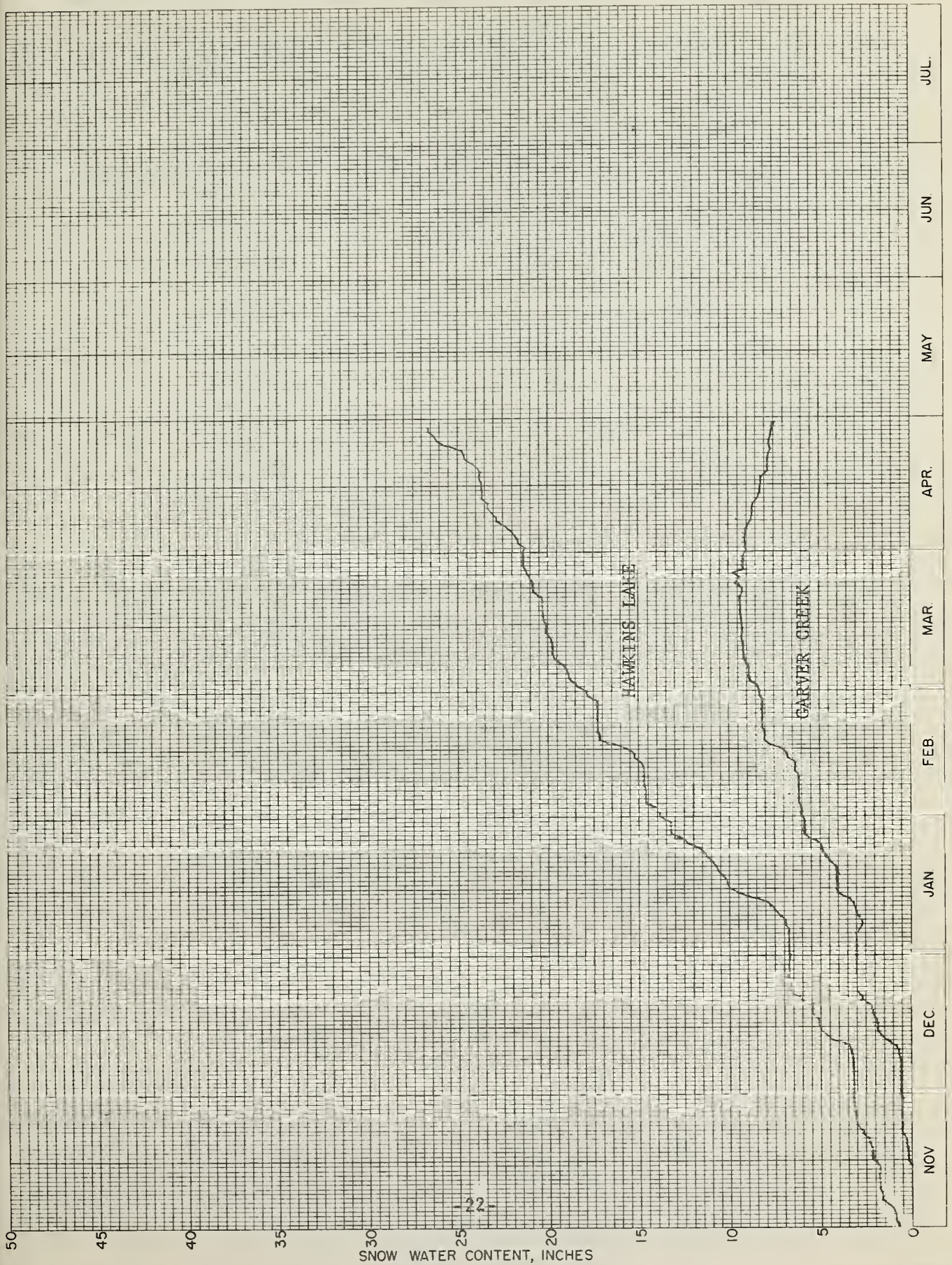
SNOW PILLOW DATA
WATER YEAR 1970

No. _____

Elev. _____

Drainage: _____

KOOTENAI



-22-

SNOW WATER CONTENT, INCHES

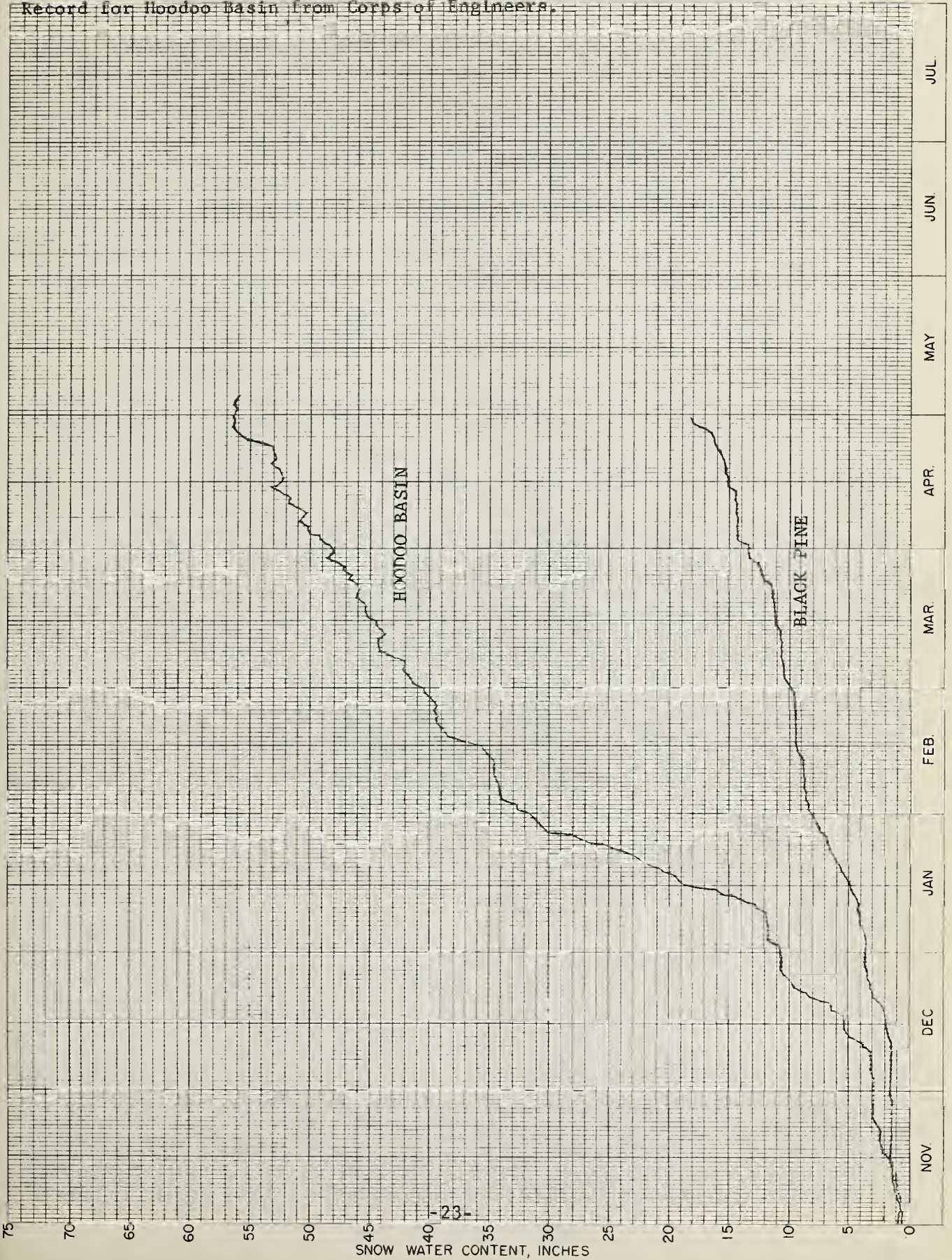
SNOW PILLOW DATA
WATER YEAR 1970

No. _____

Elev. _____

Drainage: CLARK FORK

Record for Hoodoo Basin from Corps of Engineers.



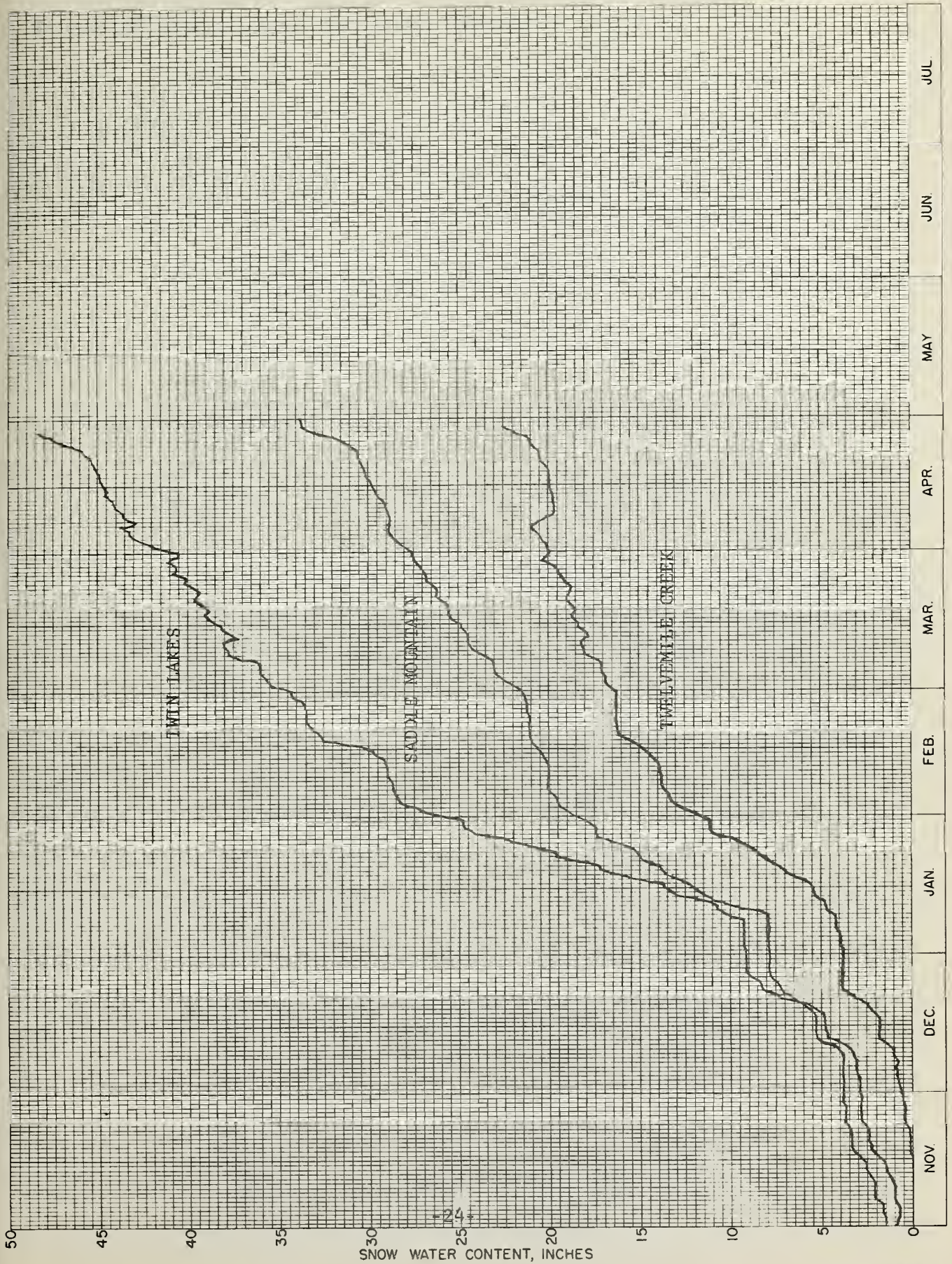
SNOW PILLOW DATA WATER YEAR 1970

No. _____

Elev. _____

Drainage: _____

BITTERROOT



SNOW PILLOW DATA WATER YEAR 1970

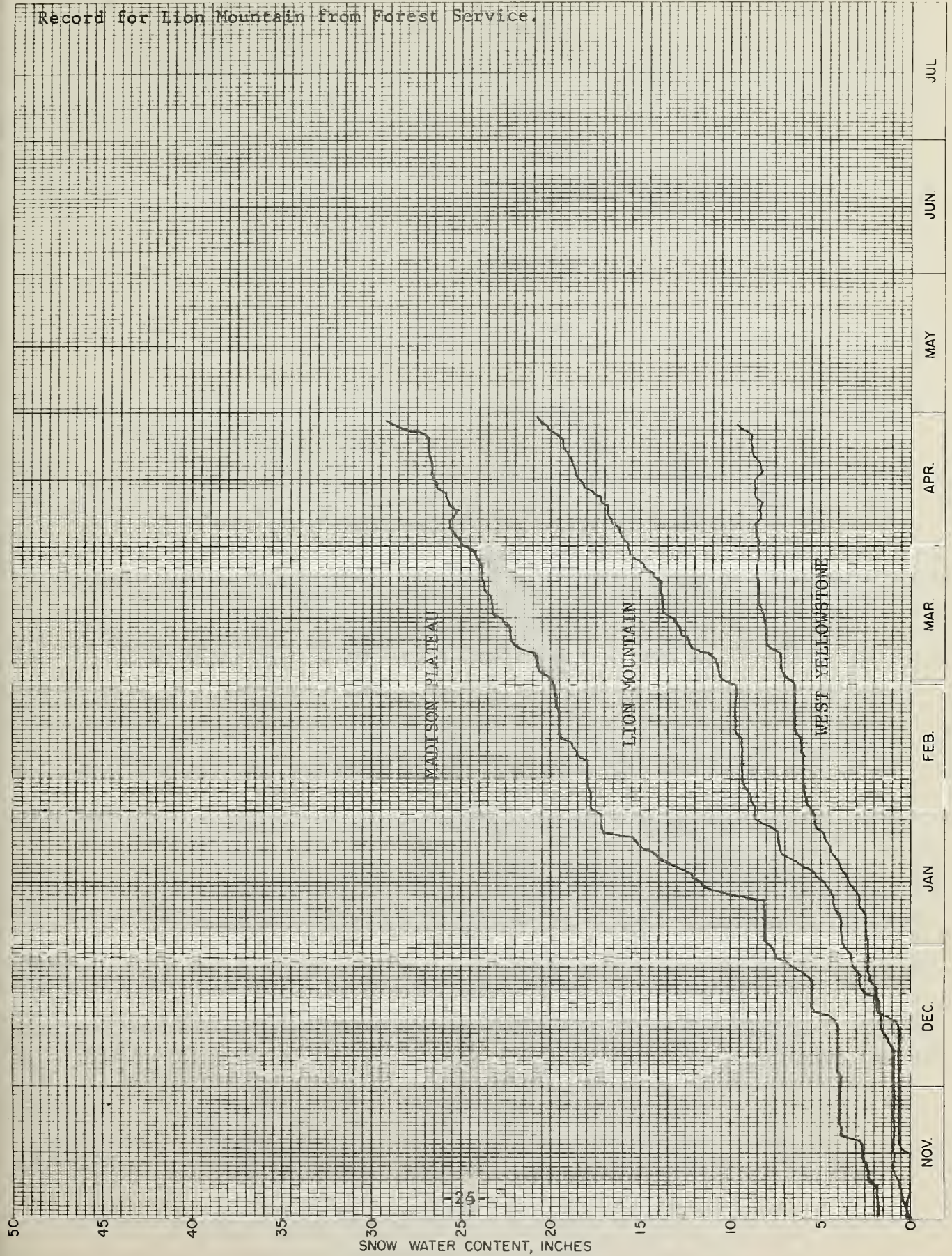
No. _____

Elev. _____

Drainage: _____

MADISON

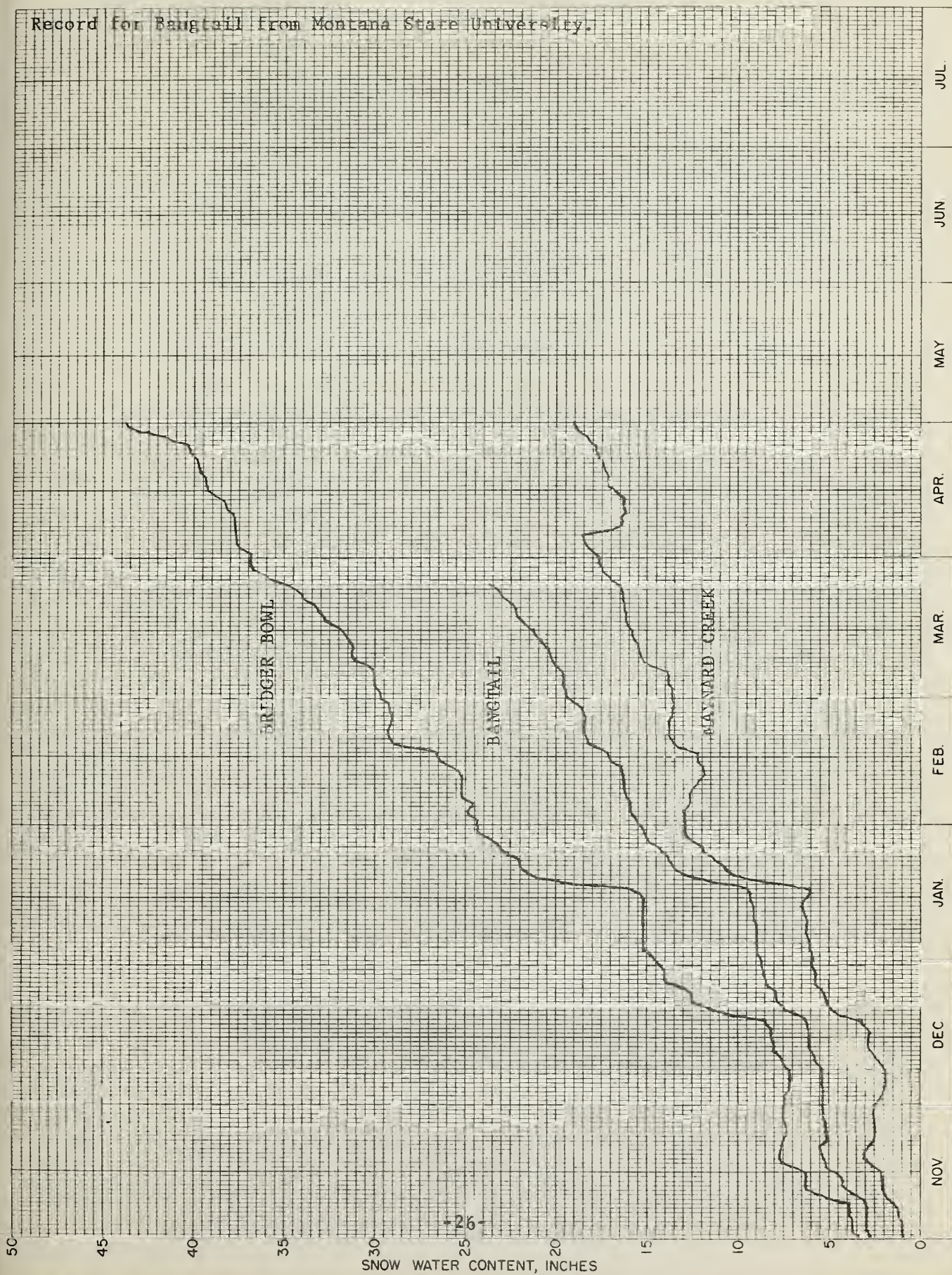
Record for Lion Mountain from Forest Service.



SNOW PILLOW DATA
WATER YEAR 1970

No. _____ Elev. _____ Drainage: GALLATIN

Record for Bangtail from Montana State University.



SNOW PILLOW DATA
WATER YEAR 1970

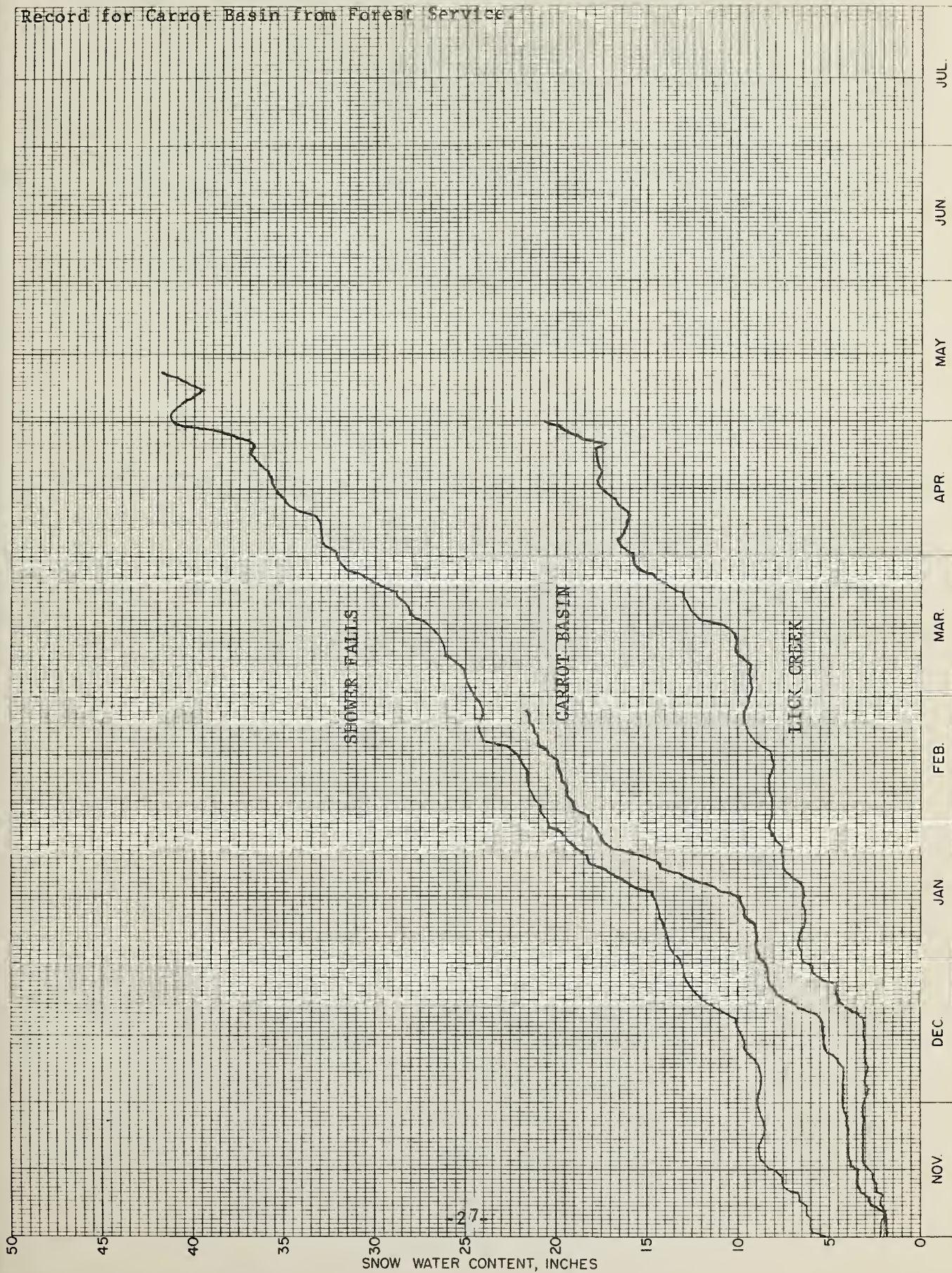
No. _____

Elev. _____

Drainage: _____

GALLATIN

Record for Carrot Basin from Forest Service.

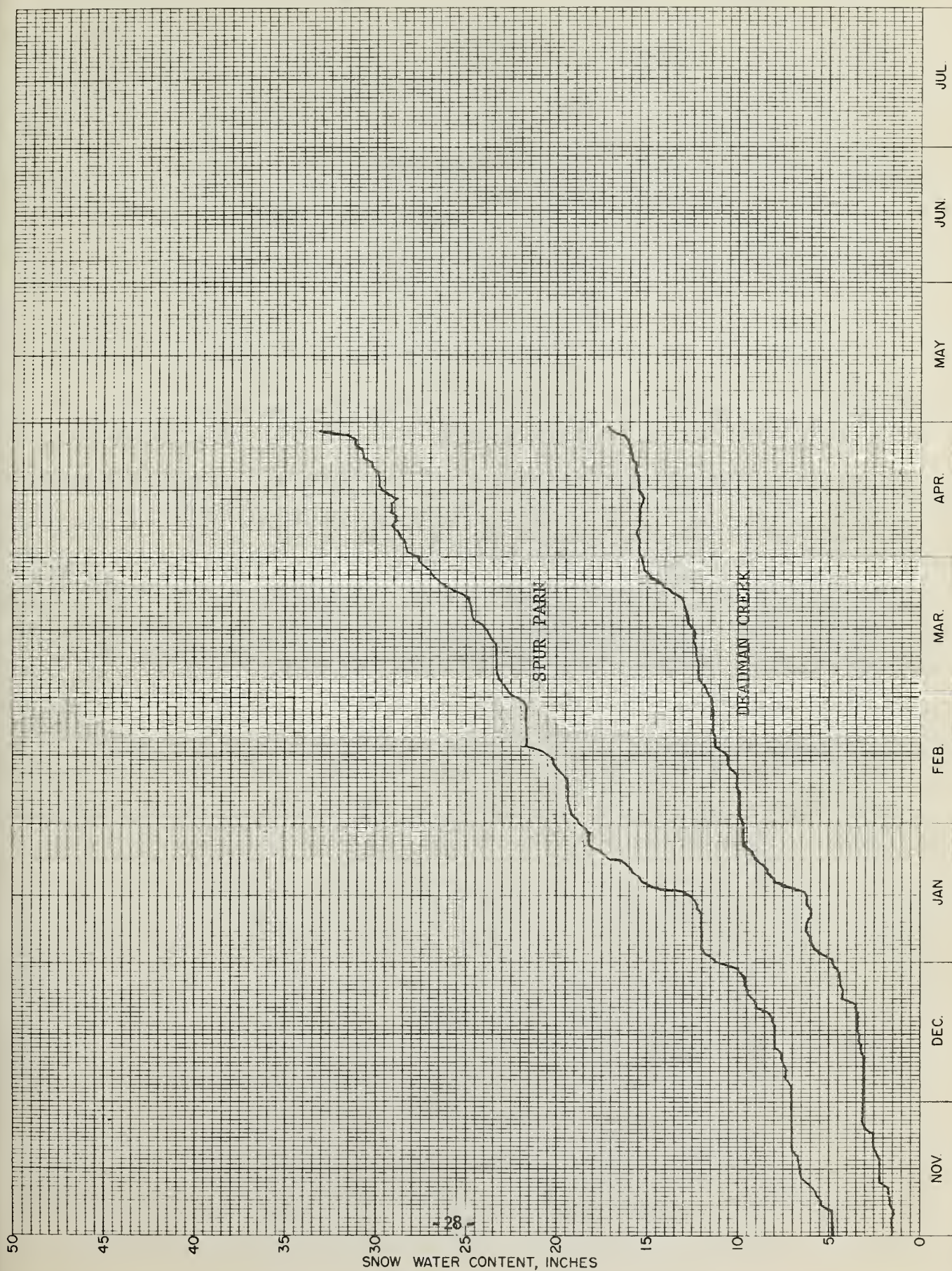


SNOW PILLOW DATA WATER YEAR 1970

No. _____

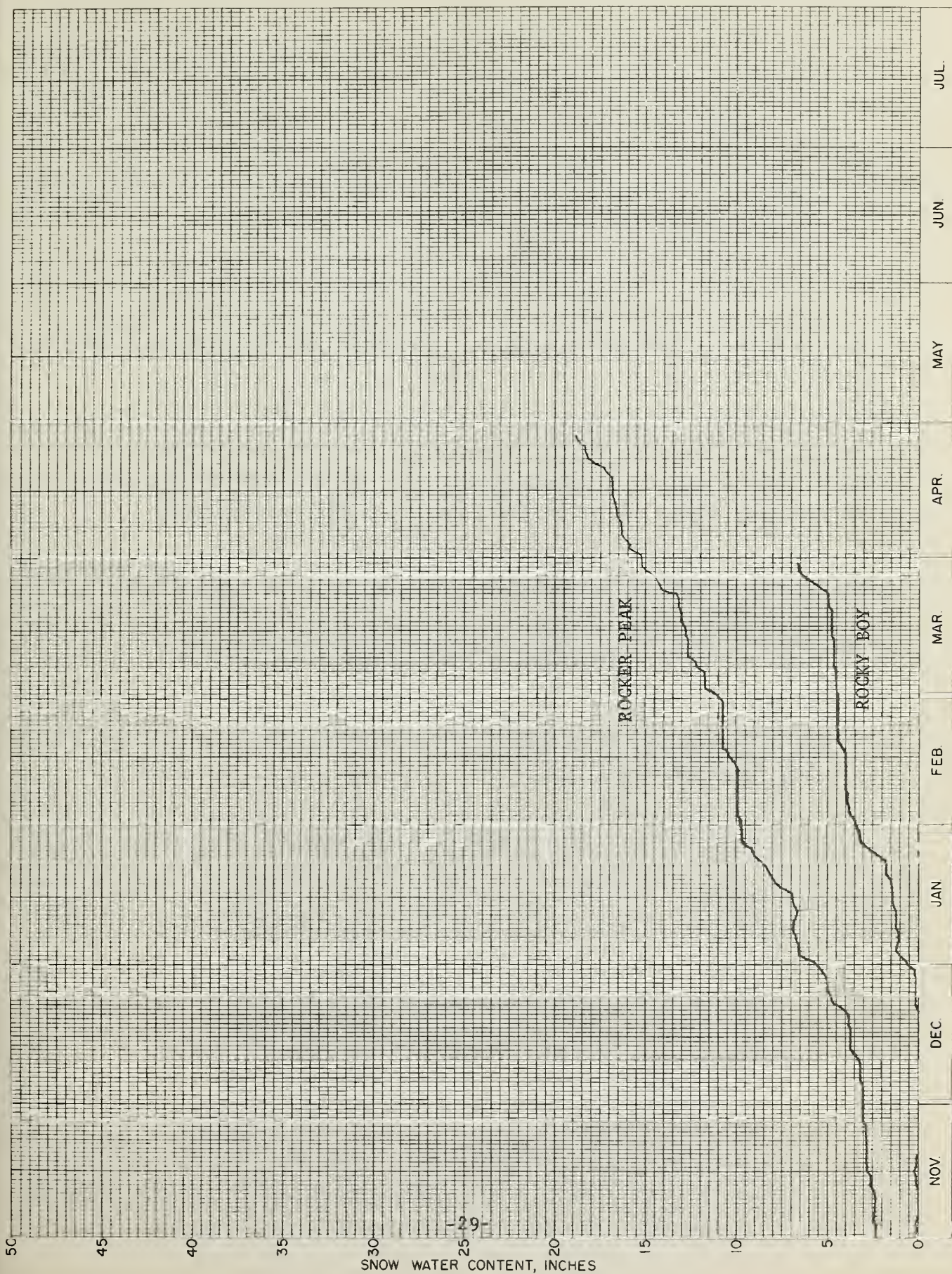
Elev. _____

Drainage: JUDITH-JEFFERSON-MISSOURI



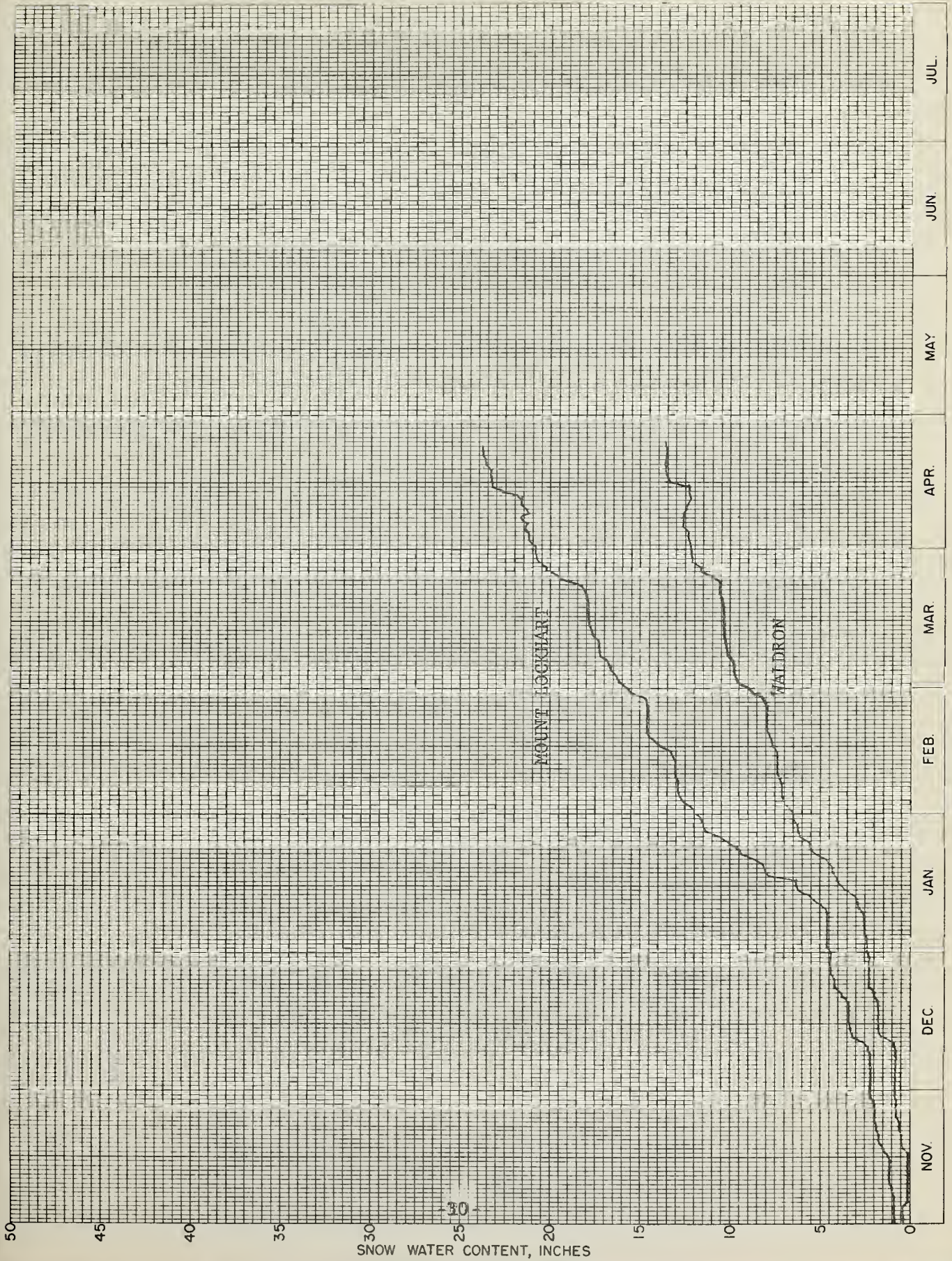
SNOW PILLOW DATA WATER YEAR 1970

No. _____ Elev. _____ Drainage: JUDITH-JEFFERSON-MISSOURI



SNOW PILLOW DATA
WATER YEAR 1970

No. _____ Elev. _____ Drainage: SUN



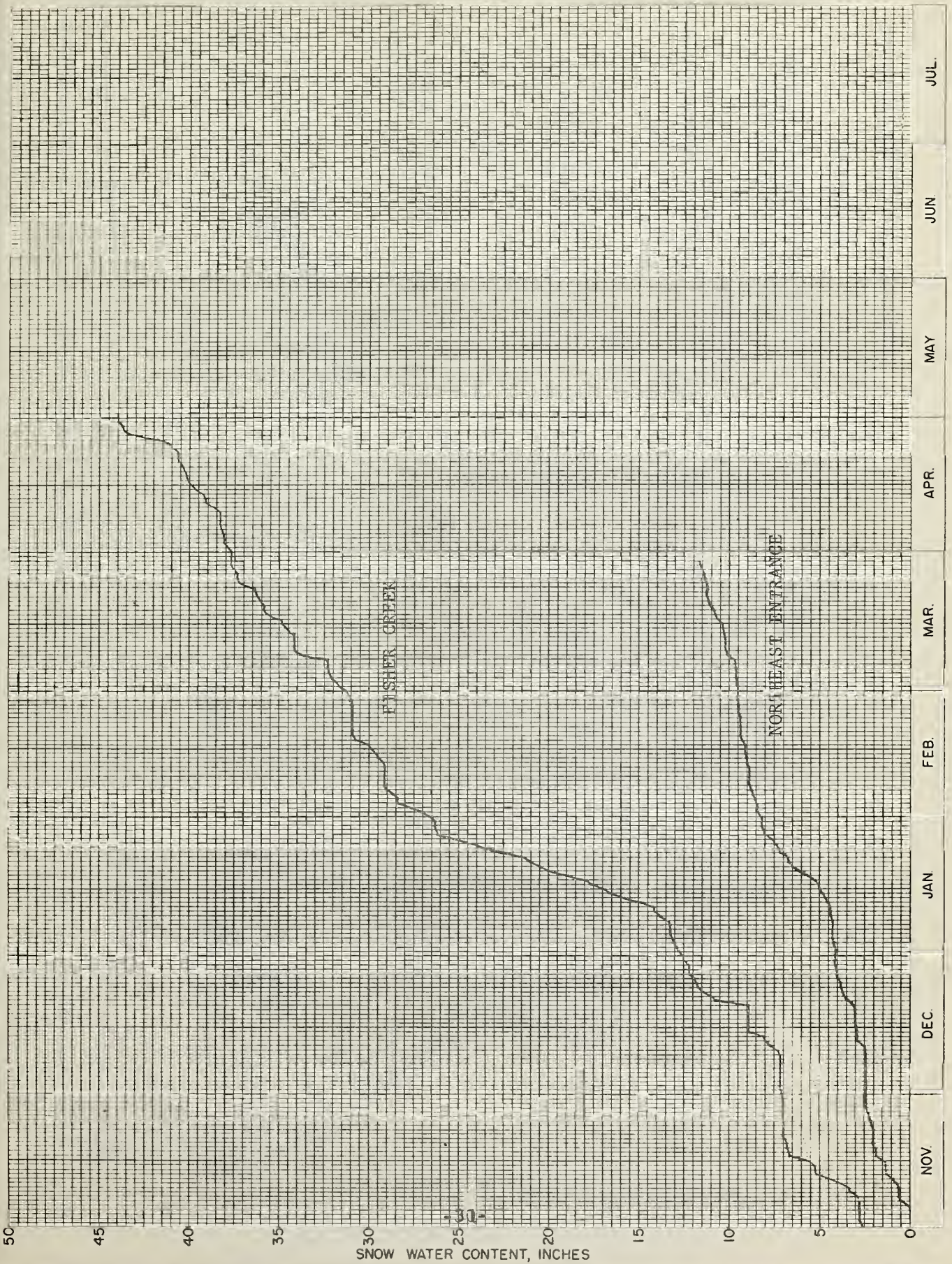
SNOW PILLOW DATA
WATER YEAR 1970

No. _____

Elev. _____

Drainage: _____

YELLOWSTONE



STATIONS

SNOW COURSES

COLUMBIA RIVER BASIN

KOOTENAI RIVER
 Coeur d'Alene
 Bonfield Mountain
 Boree Creek
 Baree Highway
 Baree Trail
 Brash Creek
 Brush Creek
 Brush Creek Timber
 Cedar Grove
 Davis Creek
 Grange Creek
 Hawkins Lake
 McLeer Creek
 Lost Soul
 Red Mountain
 Stahl Peak
 Meati Divide
 FLATHEAD RIVER
 Beaver Lake
 Bass Lake
 Big Creek
 Camp Miercy
 Flathead Mountain
 Flatfoot Mountain
 Flatfoot Creek
 Flatfoot Creek Divide
 Goshute Lake
 Little Bortling Divide
 Killehenri
 Logon Creek
 Marian Pass
 Northern Creek
 Spotted Bear Mountain
 Trunkus Lake
 Twin Creeks
 Upper Holland Lake
 CLARK FORK RIVER

15A11	5700	6	278	312
15A08	5500	4	278	306
15B11	5300	36	268	314
15B16	4800	31	282	306
15A10	4600	28	300	300
15A10	3800	2	328	306
14A06	5000	12	308	264
14A13	5000	12	308	264
15A13	4100	35	288	314
15A15	4200	35	288	314
15A05	4500	25	308	312
15A07	4200	18	318	324
15A11	4300	1	368	254
15A03	6450	18	378	334
16A09	3300	25	308	354
16A09	3300	25	308	354
15A10	5100	5	278	314
15A01	6000	4	368	294
14A12	6050	5	368	254
14A07	5450	20	378	264
14A03	5150	11	264	254
14A11	5900	31	264	114
13B03	6750	7	228	184
13A17	6400	30	228	164
13A10	6000	24	218	184
13B06	5500	20	228	184
13A19	6300	12	358	184
14A09	5150	11	288	254
13B12	6300	35	288	164
13A10	6000	35	288	164
13B13	4500	14	238	134
14A06	3850	14	378	224
14A05	4300	34	308	264
13A05	5250	34	308	164
13A07	6000	29	318	174
13B02	6200	23	258	154
13A07	6300	23	258	154
13B01	6100	9	258	174
13B11	3880	24	268	164
13B05	6200	28	208	154

Braham Lakes	3.4, 5.5, 6	1
Clower Meadow	2.3, 4.5, 5.6	2
Old Mill Creek	3.4, 5.5, 6	2
Middle Mill Creek	3.4, 5.5, 6	2
Neck	3.4, 5.5, 6	2
Saugher Mine	2.3, 4.5, 5.6	6
BIG HOLF RIVER		
Audubon Lake	3.4, 5.5, 6	1, 2
Dawson Lake	2.3, 4.5, 5.6	6
Dorchester Lake	3.4, 5.5, 6	1
Foothill	3.4, 5.5, 6	1
Hudd Lake	2.3, 4.5, 5.6	1
Palisade Creek	3.4, 5.5, 6	1
Stop-Mitt Lake	2.3, 4.5, 5.6	1
JEFFERSON RIVER		
Berry Meadow	3.4, 5.5, 6	2
Copper Mountain	3.4, 5.5, 6	1
Elk Creek	3.4, 5.5, 6	1
Platte Grounds	3.4, 5.5, 6	1, 5
Pistone Pass	3.4, 5.5, 6	1, 5
Rocky Park	3.4, 5.5, 6	1, 5
Uncle Sam Gulch	1.2, 3.4, 5.5, 6	1, 5
MADISON RIVER		
Coal Road	3.4, 5.5, 6	1, 5
Four Mile	1.2, 3.4, 5.5, 6	1, 5
Jack Creek	3.4, 5.5, 6	1, 5
Jack Creek	3.4, 5.5, 6	6
Long Mountain	3.4, 5.5, 6	1, 2
Lower Twin	1.2, 3.4, 5.5, 6	3
Meridian Reservoir	3.4, 5.5, 6	1, 5
North Meadow	1.2, 3.4, 5.5, 6	1, 5
Pemacoman Park	3.4, 5.5, 6	1
Sentinel Creek	1.2, 3.4, 5.5, 6	1
Soap Boggs Sludge	3.4, 5.5, 6	1
West Yellowstone	3.4, 5.5, 6	1

11014	8650	5	45	3M	1957	3.4,
11015	8650	5	45	3M	1957	3.4,
11016	8650	5	45	3M	1957	3.4,
11017	8650	5	45	3M	1957	3.4,
11018	7850	14	125	4M	1963	3.4,
11019	7850	14	125	4M	1963	3.4,
11020	7850	14	125	4M	1963	3.4,
11021	7850	14	125	4M	1963	3.4,
11022	8500	18	115	4M	1963	3.4,
11023	8500	18	115	4M	1963	3.4,
11024	8500	18	115	4M	1963	3.4,
11025	8500	18	115	4M	1963	3.4,
11026	8500	18	115	4M	1963	3.4,
11027	8500	18	115	4M	1963	3.4,
11028	8500	18	115	4M	1963	3.4,
11029	8500	18	115	4M	1963	3.4,
11030	8500	18	115	4M	1963	3.4,
11031	8500	18	115	4M	1963	3.4,
11032	8500	18	115	4M	1963	3.4,
11033	8500	18	115	4M	1963	3.4,
11034	8500	18	115	4M	1963	3.4,
11035	8500	18	115	4M	1963	3.4,
11036	8500	18	115	4M	1963	3.4,
11037	8500	18	115	4M	1963	3.4,
11038	8500	18	115	4M	1963	3.4,
11039	8500	18	115	4M	1963	3.4,
11040	8500	18	115	4M	1963	3.4,
11041	8500	18	115	4M	1963	3.4,
11042	8500	18	115	4M	1963	3.4,
11043	8500	18	115	4M	1963	3.4,
11044	8500	18	115	4M	1963	3.4,
11045	8500	18	115	4M	1963	3.4,
11046	8500	18	115	4M	1963	3.4,
11047	8500	18	115	4M	1963	3.4,
11048	8500	18	115	4M	1963	3.4,
11049	8500	18	115	4M	1963	3.4,
11050	8500	18	115	4M	1963	3.4,
11051	8500	18	115	4M	1963	3.4,
11052	8500	18	115	4M	1963	3.4,
11053	8500	18	115	4M	1963	3.4,
11054	8500	18	115	4M	1963	3.4,
11055	8500	18	115	4M	1963	3.4,
11056	8500	18	115	4M	1963	3.4,
11057	8500	18	115	4M	1963	3.4,
11058	8500	18	115	4M	1963	3.4,
11059	8500	18	115	4M	1963	3.4,
11060	8500	18	115	4M	1963	3.4,
11061	8500	18	115	4M	1963	3.4,
11062	8500	18	115	4M	1963	3.4,
11063	8500	18	115	4M	1963	3.4,
11064	8500	18	115	4M	1963	3.4,
11065	8500	18	115	4M	1963	3.4,
11066	8500	18	115	4M	1963	3.4,
11067	8500	18	115	4M	1963	3.4,
11068	8500	18	115	4M	1963	3.4,
11069	8500	18	115	4M	1963	3.4,
11070	8500	18	115	4M	1963	3.4,
11071	8500	18	115	4M	1963	3.4,
11072	8500	18	115	4M	1963	3.4,
11073	8500	18	115	4M	1963	3.4,
11074	8500	18	115	4M	1963	3.4,
11075	8500	18	115	4M	1963	3.4,
11076	8500	18	115	4M	1963	3.4,
11077	8500	18	115	4M	1963	3.4,

[illegible]

SOIL MOISTURE STATIONS

COLUMBIA RIVER BASIN

Big Creek
Camp Misery
Desert Mountain
Fancy Creek
Flattop Mountain
Griffin Creek Divide
Lignite Lake
Neil Roaring Divide
Nolbrook
Kishenehn
Logan Creek
Marias Pass
Mineral Creek
North Fork Jocko
Spotted Bear Mountain
Trinkus Lake
Twin Creeks
Upper Holland Lake
CLARK FORK RIVER

13003	6750	7	228	164
13004	6750	8	228	164
13005	6750	9	228	164
13006	6750	10	228	164
13007	6750	11	228	164
13008	6750	12	228	164
13009	6750	13	228	164
13010	6750	14	228	164
13011	6750	15	228	164
13012	6750	16	228	164
13013	6750	17	228	164
13014	6750	18	228	164
13015	6750	19	228	164
13016	6750	20	228	164
13017	6750	21	228	164
13018	6750	22	228	164
13019	6750	23	228	164
13020	6750	24	228	164
13021	6750	25	228	164
13022	6750	26	228	164
13023	6750	27	228	164
13024	6750	28	228	164
13025	6750	29	228	164
13026	6750	30	228	164
13027	6750	31	228	164
13028	6750	32	228	164
13029	6750	33	228	164
13030	6750	34	228	164
13031	6750	35	228	164
13032	6750	36	228	164
13033	6750	37	228	164
13034	6750	38	228	164
13035	6750	39	228	164
13036	6750	40	228	164
13037	6750	41	228	164
13038	6750	42	228	164
13039	6750	43	228	164
13040	6750	44	228	164
13041	6750	45	228	164
13042	6750	46	228	164
13043	6750	47	228	164
13044	6750	48	228	164
13045	6750	49	228	164
13046	6750	50	228	164
13047	6750	51	228	164
13048	6750	52	228	164
13049	6750	53	228	164
13050	6750	54	228	164
13051	6750	55	228	164
13052	6750	56	228	164
13053	6750	57	228	164
13054	6750	58	228	164
13055	6750	59	228	164
13056	6750	60	228	164
13057	6750	61	228	164
13058	6750	62	228	164
13059	6750	63	228	164
13060	6750	64	228	164
13061	6750	65	228	164
13062	6750	66	228	164
13063	6750	67	228	164
13064	6750	68	228	164
13065	6750	69	228	164
13066	6750	70	228	164
13067	6750	71	228	164
13068	6750	72	228	164
13069	6750	73	228	164
13070	6750	74	228	164
13071	6750	75	228	164
13072	6750	76	228	164
13073	6750	77	228	164
13074	6750	78	228	164
13075	6750	79	228	164
13076	6750	80	228	164
13077	6750	81	228	164
13078	6750	82	228	164
13079	6750	83	228	164
13080	6750	84	228	164
13081	6750	85	228	164
13082	6750	86	228	164
13083	6750	87	228	164
13084	6750	88	228	164
13085	6750	89	228	164
13086	6750	90	228	164
13087	6750	91	228	164
13088	6750	92	228	164
13089	6750	93	228	164
13090	6750	94	228	164
13091	6750	95	228	164
13092	6750	96	228	164
13093	6750	97	228	164
13094	6750	98	228	164
13095	6750	99	228	164
13096	6750	100	228	164

Rock Creek	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
------------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--

[illegible]

1	KOOTENAI RIVER	
1	Barro Trail	15815M
1	Marphy Lake R.S.	16410M
1	Raven R.S.	15402M
2	FLATHEAD RIVER	
2	Osset Mountain	13402M
2	Marías Pass	13405M
2,2	CLARK FORK RIVER	
1	Black Pine	13613M
1	Lubrecht Forest	13614M
2	Sceley Lake	13815M
2	Sakakho Summit	13203M
1,3,6		

MISSOURI RIVER BASIN

Hoodoo Basin
Hoodoo Creek
Intergrade
Lubbert Forest No. 2
Lubbert Forest No. 3
Lubbert Forest No. 6
N. N. Fork Elk Creek
Red Lion
Shoshone
Skullaho Summit
Saddle Rock Mountain
Siltstone Creek
Spring Gulch
Stuart Hill
Stuart Mountain
T.V. Mountain

BITTERROOT RIVER
Mud Lake
Coyote Meadows Trail
East Fork B.S.
Gibbons Pass
Lost Nose
Noz Perce Camp
Noz Perce Pass
Saddle Mountain
Twelvemile Creek
Utah Lakes

ST. MARY RIVER

15C10	6000	17	18N	27M
15C11	6000	16	18N	27M
15C12	6000	16	18N	27M
15C13	6000	16	18N	27M
15C14	6000	16	18N	27M
15C15	6000	16	18N	27M
15C16	6000	16	18N	27M
15C17	6000	16	18N	27M
15C18	6000	16	18N	27M
15C19	6000	16	18N	27M
15C20	6000	16	18N	27M
15C21	6000	16	18N	27M
15C22	6000	16	18N	27M
15C23	6000	16	18N	27M
15C24	6000	16	18N	27M
15C25	6000	16	18N	27M
15C26	6000	16	18N	27M
15C27	6000	16	18N	27M
15C28	6000	16	18N	27M
15C29	6000	16	18N	27M
15C30	6000	16	18N	27M
15C31	6000	16	18N	27M
15C32	6000	16	18N	27M
15C33	6000	16	18N	27M
15C34	6000	16	18N	27M
15C35	6000	16	18N	27M
15C36	6000	16	18N	27M
15C37	6000	16	18N	27M
15C38	6000	16	18N	27M
15C39	6000	16	18N	27M
15C40	6000	16	18N	27M
15C41	6000	16	18N	27M
15C42	6000	16	18N	27M
15C43	6000	16	18N	27M
15C44	6000	16	18N	27M
15C45	6000	16	18N	27M
15C46	6000	16	18N	27M
15C47	6000	16	18N	27M
15C48	6000	16	18N	27M
15C49	6000	16	18N	27M
15C50	6000	16	18N	27M
15C51	6000	16	18N	27M
15C52	6000	16	18N	27M
15C53	6000	16	18N	27M
15C54	6000	16	18N	27M
15C55	6000	16	18N	27M
15C56	6000	16	18N	27M
15C57	6000	16	18N	27M
15C58	6000	16	18N	27M
15C59	6000	16	18N	27M
15C60	6000	16	18N	27M
15C61	6000	16	18N	27M
15C62	6000	16	18N	27M
15C63	6000	16	18N	27M
15C64	6000	16	18N	27M
15C65	6000	16	18N	27M
15C66	6000	16	18N	27M
15C67	6000	16	18N	27M
15C68	6000	16	18N	27M
15C69	6000	16	18N	27M
15C70	6000	16	18N	27M
15C71	6000	16	18N	27M
15C72	6000	16	18N	27M
15C73	6000	16	18N	27M
15C74	6000	16	18N	27M
15C75	6000	16	18N	27M
15C76	6000	16	18N	27M
15C77	6000	16	18N	27M
15C78	6000	16	18N	27M
15C79	6000	16	18N	27M
15C80	6000	16	18N	27M
15C81	6000	16	18N	27M
15C82	6000	16	18N	27M
15C83	6000	16	18N	27M
15C84	6000	16	18N	27M
15C85	6000	16	18N	27M
15C86	6000	16	18N	27M
15C87	6000	16	18N	27M
15C88	6000	16	18N	27M
15C89	6000	16	18N	27M
15C90	6000	16	18N	27M
15C91	6000	16	18N	27M
15C92	6000	16	18N	27M
15C93	6000	16	18N	27M
15C94	6000	16	18N	27M
15C95	6000	16	18N	27M
15C96	6000	16	18N	27M
15C97	6000	16	18N	27M
15C98	6000	16	18N	27M
15C99	6000	16	18N	27M
15C100	6000	16	18N	27M

[illegible]

MAIN EVENT	8200	5300	21	28N	16E	1962	1,2,3,4,5,6,7
10004	8100	14	55	6E	1935	1,2,3,4,5,6,7	
10003	6600	22	45	6E	1935	1,2,3,4,5,6,7	
10002	6600	22	45	6E	1935	1,2,3,4,5,6,7	
10001	7600	22	45	6E	1963	3,4,5,6,7	
1018	7600	22	45	3E	1963	3,4,5,6,7	
101018	6310	19	14	7E	1967	1,2,3,4,5,6,7	
10001	6700	24	35	6E	1939	2,3,4,5,6,7	
10000	6700	24	35	6E	1939	2,3,4,5,6,7	
101015	8100	36	35	2E	1967	1,2,3,4,5,6,7	
101014	8100	36	35	2E	1967	1,2,3,4,5,6,7	
41026	7150	1	115	5E	1934	1,2,3,4,5,6,7	
8200	5300	21	28N	16E	1962	1,2,3,4,5,6,7	
12001	7850	1	28N	3E	1963	1,2,3,4,5,6,7	
12005	6500	2	8N	5W	1936	1,2,3,4,5,6,7	
10009	6450	23	28E	10E	1969	1,2,3,4,5,6,7	
10008	6450	23	28E	10E	1969	1,2,3,4,5,6,7	
10013	7000	2	5N	10E	1969	3,4,5,6,7	
10007	8000	10	8N	8E	1963	3,4,5,6,7	
10014	6600	58	5N	10E	1939	3,4,5,6,7	
10013	6600	58	5N	10E	1939	3,4,5,6,7	
10011	8050	16	11N	12E	1959	3,4,5,6,7	
10012	6510	16	11N	12E	1959	3,4,5,6,7	
10011	6510	16	11N	12E	1959	3,4,5,6,7	
10010	6510	16	11N	12E	1959	3,4,5,6,7	
12001	5200	27	28E	10E	1969	1,2,3,4,5,6,7	
12001	6000	16	13N	7W	1934	3,4,5,6,7	
12002	6000	12	8N	6W	1935	1,2,3,4,5,6,7	
12003	6000	12	8N	6W	1935	1,2,3,4,5,6,7	
12004	6000	12	8N	6W	1935	1,2,3,4,5,6,7	

[illegible]

MISSOURI RIVER BASIN

BEAVERHEAD RIVE

bloody Dick
Carter Creek
Dad Creek Lake
Elk Horn Spring
Gold Stone
Lakesview Canyon
Lakesview Ridge
Lamb Pass
Lamb Ridge
Trell Creek
White Pine Ridge

13D10	7600	12	85	164
12064	7400	22	85	74
13E22	8400	24	125	134
13D15	7800	21	45	134
13D09	8100	11	164	164
11E04	6930	26	145	24
11E03	7400	27	145	24
13E01	7480	9	105	154
13E23	8100	4	105	154
13E02	7090	15	105	154
12E01	8550	18	145	94

LEGEND

1/ Numerals 1,2,3,4,5,5 $\frac{1}{2}$,6 refer to January 1, February 1, March 1, April 1, May 1, May 15 and June 1.

1. U. S. Soil Conservation Service
2. U. S. Forest Service
3. U. S. Geological Survey
4. Montana Pests Company
5. MSU Agricultural Experiment Station
6. U. of M. School of Forestry
7. Department of Energy, Mine & Resources
8. U. S. Bureau of Sport Fisheries & Wildlife

Agencies and Organizations Cooperating in Montana Snow Surveys

U. S. Forest Service
Region I, Missoula, Montana
Montana Forests and Ranger
Districts

U. S. Geological Survey
Helena, Montana
Portland, Oregon

U. S. Army Corps of Engineers
Portland, Oregon
Seattle, Washington
Walla Walla, Washington
Omaha, Nebraska

U. S. Indian Irrigation Service
St. Ignatius, Montana

U. S. Weather Bureau
Helena, Montana
Portland, Oregon
Kansas City, Missouri

U. S. Bureau of Sports Fisheries
and Wildlife
Red Rock Lakes Refuge
Monida, Montana

U. S. Bureau of Reclamation
Billings, Montana
Boise, Idaho

U. S. Bonneville Power Administration
Portland, Oregon

U. S. Soil Conservation Service
Montana, Wyoming, Idaho

Soil and Water Conservation Districts
Montana Counties

U. S. National Park Service
Yellowstone National Park
Glacier National Park

Montana Power Company
Butte, Montana

Montana Water Resources Board
Helena, Montana

North Montana Branch Station
Agricultural Experiment Station
Havre, Montana

Montana State University
Agricultural Experiment Station
Bozeman, Montana

University of Montana
School of Forestry
Missoula, Montana

Water Rights Branch, Dept. of
Lands and Forests
Victoria, British Columbia

Department of Energy, Mines and
Resources
Calgary, Alberta

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

P. O. BOX 98
BOZEMAN, MONTANA 59715

OFFICIAL BUSINESS



POSTAGE AND FEES PAID
U. S. DEPARTMENT OF AGRICULTURE

FIRST CLASS MAIL

USDA - NATIONAL AGRICULTURAL LIBRARY
CURRENT SERIAL RECORD
BELTSVILLE, MD. 20705

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Furnishes the basic data
necessary for forecasting
water supply for irrigation,
domestic and municipal water
supply, hydro-electric power
generation, navigation,
mining and industry

*"The Conservation of Water begins
with the Snow Survey"*